



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,638	11/18/2003	Albert Heilmann	58714 (42568)	7671
21874	7590	08/23/2004	EXAMINER	
EDWARDS & ANGELL, LLP			BASTIANELLI, JOHN	
P.O. BOX 55874			ART UNIT	PAPER NUMBER
BOSTON, MA 02205			3754	

DATE MAILED: 08/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/716,638	HEILMANN ET AL.
	Examiner	Art Unit
	John Bastianelli	3754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 18 November 2003.  
 2a) This action is **FINAL**.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-20 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-20 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 18 November 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because in Fig. 1, reference designations 1601 and 1605 appear to be switched. Also, in Fig. 1, 104 is not pointing to the central bore (it's pointing to deformable member 186). In Figs. 1-4, 122 is not pointing to the lower bore portion (it's pointing to deformable member 186). 161 is not a valve seat (161 is the valve body and the 132 is the valve seat). The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 171, 180. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Information Disclosure Statement***

2. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be

incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### *Specification*

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because it is longer than 150 words.

Correction is required. See MPEP § 608.01(b).

5. The disclosure is objected to because of the following informalities: 161 is not a valve seat (161 is the valve body and the 132 is the valve seat). Appropriate correction is required.

### *Claim Suggestions*

6. Claims 1-20 use the term valve seat (reference designation 161) for what is actually the valve body (the valve seat is reference designation 132).

7. The examiner does not understand the claims regarding in claim 1, "the lower end having in conjunction with the key-way a cavity of predetermined shape" and in claim 2, "an internal bore extending lengthwise therein". Aren't these the same thing?

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Mohn US 5,657,790.

Mohn discloses a unidirectional stepped valve housing, wherein said housing comprises a central bore that includes an upper portion, lower portion and a middle portion located therebetween, wherein said lower portion is narrower than said middle portion which in turn is narrower than said upper portion, a port in the middle portion of said housing to facilitate connection of a nozzle thereto, a t-stem having a lower end with a key-way, the lower end further having in conjunction with the key-way a cavity of a predetermined shape; and a valve seat providing the primary valve seal when the valve is closed, wherein the valve seat has an upper portion and a lower portion, the lower portion being structured and arranged to provide the primary valve seal in cooperation with the valve housing, the upper portion having a geometry for engaging with the t-stem to provide a locked assembly; the t-stem and valve seat being located in the housing and cooperating to position the valve seat for the primary valve seal. The t-stem has an internal bore extending lengthwise therein, the internal bore having upper portion with a first diameter and a lower portion with a second diameter, the first diameter being larger than the second diameter thereby forming an internal edge within the bore for cooperating with the valve seat to lock the

valve seat in the t-stem when positioned within the valve housing. A blocking element 106 is in the lower portion of the central bore and is irreversible or reversible. An O-ring 162 provides a secondary seal and is seen to provide frictional force that would limit or prevent rotation of the valve seat as snap fit connection 171 would provide this feature as would the open-ended statement that other connections that may be provided by ones skilled in the art . The method is practiced by the apparatus.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Alternatively, claims 8-9 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mohn US 5,657,790 in view of Betz US 5,992,440.

Mohn lacks a specific mention of valve seat not rotating. Betz discloses a valve seat 218 that does not rotate relative to the valve stem 208 due to a connection 220, 222. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the connection between the valve seat and the rotatable valve stem of Betz in the valve of Mohn in order to provide decreased wear of the seating area as taught by Betz (col. 1, lines 46-56).

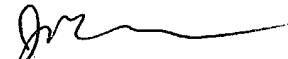
***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tarnay discloses a non-rotatable valve seat. Chen, Mohn, Lane, Jemberg, O'Connor, Devol, and Wagner disclose valves with a T-stem and a valve seat with an O-ring.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Bastianelli whose telephone number is (703) 305-0058. The examiner can normally be reached on M-F (9:00-6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Mancene can be reached on (703) 308-2696. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
John Bastianelli  
Primary Examiner  
Art Unit 3754

  
JB

August 17, 2004